

ATTACHMENT D SAMPLE

This document has been prepared to provide an example of an environmental requirements, criteria or limitations (ERCLs) analysis prepared to meet the requirements of the Voluntary Cleanup and Redevelopment Act (VCRA), which requires that the proposed remedy meet the requirements of §§ 75-10-721(2)(a) and (b), MCA. DEQ has attempted to include most of the major ERCLs that have been required for previous voluntary cleanup plans (VCPs). Therefore, the conditions described as being in the fictitious VCP under the VCP Compliance sections of this example may not be consistent with one remedy but are meant as examples of how various remedies might comply with the ERCLs listed. In addition, it is possible that some of these ERCLs might not apply to a remedy or that additional ERCLs may apply. Therefore, it is suggested that applicants work with DEQ to develop an appropriate facility-specific ERCLs analysis. The introductory text that follows should be included at the beginning of the ERCLs section of the VCP with the VCP-specific bracketed information completed.

ENVIRONMENTAL REQUIREMENTS, CRITERIA OR LIMITATIONS ANALYSIS

Remedial action undertaken pursuant to the Comprehensive Environmental Cleanup and Responsibility Act (CECRA), § 75-10-701, et seq., MCA, must “attain a degree of cleanup of the hazardous or deleterious substance and control of a threatened release or further release of that substance that assures protection of public health, safety and welfare and of the environment.” Section 75-10-721(1), MCA. Additionally, DEQ “shall require cleanup consistent with applicable state or federal environmental requirements, criteria, or limitations” and “may consider substantive state or federal environmental requirements, criteria or limitation that are relevant to the facility conditions.” Sections 75-10-721(2)(a) and (b), MCA.

There is a distinction between “applicable” requirements and those that are “relevant”. “Applicable” requirements are those requirements that would legally apply at the facility regardless of the CECRA action. “Relevant” requirements are those requirements that are not applicable, but address situations or problems sufficiently similar to those at the facility and, therefore, are relevant for use at the facility. Attainment of “applicable” requirements is mandatory under CECRA. “Relevant” requirements may be considered by DEQ in approving remedial actions under CECRA. All relevant requirements identified in the approved VCP must be attained.

Environmental requirements, criteria or limitation (ERCLs) are generally of three types: action-specific, contaminant-specific, and location-specific. Action-specific requirements are those that are triggered by the performance of a certain activity as part of a particular remedy. They do not in themselves determine the remedy but rather indicate the manner in which the remedy must be implemented. Contaminant-specific requirements are those that establish an allowable level or concentration of a hazardous or deleterious substance in the environment or which prescribe a level or method of treatment for a hazardous or deleterious substance. Location-specific requirements are those that serve as restrictions on the concentration of a hazardous or

deleterious substance or the conduct of activities solely because the facility is in a specific location or the action affects specified types of areas.

CECRA defines as cleanup requirements only state and federal ERCLs. Remedial designs, implementation, operation, and maintenance must, nevertheless, comply with all other applicable laws, both state and federal. Many such laws, while not strictly environmental, have environmental impacts. Identification of all other applicable laws, including health and safety laws and local regulations that must be complied with during implementation of the voluntary cleanup plan, remains the VCRA applicant's responsibility.

Many requirements listed here are promulgated as identical or nearly identical requirements in both federal and state law, usually pursuant to delegated environmental programs administered by the Environmental Protection Agency and the states, such as the requirements of the federal Clean Water Act and the Montana Water Quality Act. The preamble to the National Contingency Plan states that such a situation results in citation to the state provision as the appropriate standard, but treatment of the provision as a federal requirement. ERCLs and other laws that are unique to state law are also identified.

Within this document, are identified applicable or relevant state and federal ERCLs for the proposed [Facility] voluntary cleanup plan (VCP). The ERCLs contained in this document are tailored to the proposed voluntary cleanup plan submitted and are intended to apply exclusively to this voluntary cleanup plan dated [VCP Date]. If a different plan or remedial action were proposed, preferred, chosen, or implemented for this facility, the ERCLs contained herein might be substantially different.

1.0 ACTION-SPECIFIC ERCLs

Air Standards

These standards, promulgated pursuant to section 109 of the Clean Air Act, 42 U.S.C. §§ 7401, et seq., (**Applicable**) are applicable to releases into the air from any cleanup activities.

Sections 75-2-101, et seq., MCA, (**Applicable**) provides that state emission standards are enforceable under the Montana Clean Air Act.

ARM 17.8.802 (**Applicable**) incorporates by reference the air regulations in certain parts of CFR Title 40 regarding quality assurance requirements for prevention of significant deterioration air monitoring; standards of performance for new stationary sources; emission standards for hazardous air pollutants, and other standards and requirements.

ARM 17.8.805 (**Applicable**) provides ambient air ceilings, and states that no concentrations of a pollutant shall exceed concentrations permitted under with the applicable secondary or the primary national ambient air quality standard, whichever concentration is lowest for the pollutant for a period of exposure.

ARM 17.8.204 and .206 (**Applicable**) provides for ambient air monitoring and provides that, generally, all ambient air monitoring, sampling and data collection, recording, analysis and

transmittal must be in compliance with the Montana Quality Assurance Manual except when DEQ determines that more stringent requirements are necessary.

ARM 17.8.220 (**Applicable**) No person shall cause or contribute to concentrations of particulate matter in the ambient air such that the mass of settle particulate matter exceeds a 30 day average: 10 gm/m², 30 day average, not to be exceeded. A measurement method is also provided.

Dust control regulations are promulgated at ARM 17.8.223 as part of a federally approved State Implementation Plan (SIP), pursuant to the Clean Air Act of Montana, §§ 75-2-101 et seq., MCA (**Applicable**). Corresponding federal regulations are found at 40 CFR 50.6 (**Applicable**). Particulate matter that is 10 microns in diameter or smaller (PM-10): No person shall cause or contribute to concentrations of PM-10 in the ambient air which exceed 150 µg/m³ of air, 24 hour average, no more than one expected exceedance per calendar year and 50 µg/m³ of air, annual average.

ARM 17.8.212 and 40 CFR Part 50 and section 109 of the Clean Air Act (**Applicable**) provide ambient air standards for carbon monoxide, hydrogen sulfide, nitrogen dioxide, sulfur dioxide and ozone. If emissions of these compounds were to occur at the facility in connection with any cleanup action, these standards would also be applicable.

ARM 17.8.308 (**Applicable**) provides that no person shall cause or authorize the production, handling, transportation or storage of any material; or cause or authorize the use of any street, road, or parking lot; or operate a construction facility or demolition project, unless reasonable precautions to control emissions of airborne particulate matter are taken.

ARM 17.8.308 and ARM 17.8.304 (**Applicable**) state that emissions of airborne particulate matter must be controlled so that they do not “exhibit an opacity of twenty percent (20%) or greater average over six consecutive minutes.”

ARM 26.4.761 (**Relevant**) specifies a range of measures for controlling fugitive dust emissions during mining and reclamation activities. Some of the measures could be considered relevant to control fugitive dust emissions in connection with excavation, earth moving and transportation activities conducted as part of the remedy at the facility. Such measures include, for example, paving, watering, chemically stabilizing, or frequently compacting and scraping roads, promptly removing rock, soil or other dust-forming debris from roads, restricting vehicle speeds, revegetating, mulching, or otherwise stabilizing the surface of areas adjoining roads, restricting unauthorized vehicle travel, minimizing the area of disturbed land, and promptly revegetating regraded lands.

ARM 17.8.324 (**Applicable**) contains certain standards regarding hydrocarbon emissions and the treatment, storage, and handling of petroleum products.

VCP Compliance: The proposed remedy does involve handling impacted soil. However, as described in Section 5.1 of this VCP, remedial actions at the facility will include wetting and other best management practices related to fugitive dust control. Remedial actions will be halted if significant dust is generated and will not resume until adequate dust control measures are in

place. Dust control measures will ensure that air standards will not be exceeded during the proposed remedial action. Air monitoring is not a necessary component of the proposed remedial action. The proposed remedy will not result in emissions of the specific compounds included in these regulations. The proposed remedy does not involve the treatment, storage or handling of petroleum products other than basic refueling of construction equipment. Therefore, the proposed remedy meets the requirements of these ERCLs.

Water Well Requirements

Sections 37-43-101 to 402, MCA (**Applicable**) provides regulations and licensing for drillers or makers of water wells and monitoring wells.

ARM 36.21.701 through -810 (**Applicable**) provide requirements for licensing and construction standards for drilling or making monitoring wells.

Section 85-2-505, MCA (**Applicable**) precludes the wasting of groundwater. Any well producing waters that contaminate other waters must be plugged or capped, and wells must be constructed and maintained so as to prevent waste, contamination, or pollution of groundwater.

Section 85-2-516, MCA (**Applicable**) states that within 60 days after any well is completed a well log report must be filed by the driller with the Montana Department of Natural Resources and Conservation and the appropriate county clerk and recorder.

ARM 17.30.641 (**Applicable**) provides standards for sampling and analysis of water to determine quality.

ARM 17.30.646 (**Applicable**) requires that bioassay tolerance concentrations be determined in a specified manner.

VCP Compliance: A licensed monitoring well constructor will abandon a monitoring well and install a monitoring well as part of the proposed remedy. Monitoring wells will also be sampled as part of the proposed remedy. These activities will be conducted in accordance with the requirements of these ERCLs.

Solid Waste Management Requirements

Sections 75-10-201 et seq., MCA (**Applicable**) specify requirements that apply to the location of any solid waste management facility.

ARM 17.50.501 through -503 (**Applicable**) provides standards for the storage, handling, treatment, recycling, recovery, and disposal of non-hazardous solid waste.

ARM 17.50.504 (**Applicable**) classifies disposal facilities.

ARM 17.50.505 (**Applicable**) provides that a facility for the treatment, storage or disposal of solid wastes must meet certain specified standards. This regulation also specifies general soil and hydrogeological requirements pertaining to the location of any solid waste management facility.

ARM 17.50.505(2) (**Applicable**) specifies standards for solid waste management facilities, including the requirements that:

1. Class II landfills must confine solid waste and leachate to the disposal facility. If there is the potential for leachate migration, it must be demonstrated that leachate will only migrate to underlying formations which have no hydraulic continuity with any state waters;
2. adequate separation of group II wastes from underlying or adjacent water must be provided; and
3. no new disposal units or lateral expansions may be located in wetlands.

ARM 17.50.523 (**Applicable**) requires that waste be transported in such a manner as to prevent its discharge, dumping, spilling or leaking from the transport vehicle.

ARM 17.50.525 (**Applicable**) states that DEQ may inspect at reasonable hours.

ARM 17.50.506 (**Applicable**) specifies design of landfills.

ARM 17.50.509 (**Applicable**) provides operational and maintenance requirements.

ARM 17.50.511 (**Applicable**) provides general operational and maintenance and design requirements for solid waste facilities using landfilling methods. Specific operational requirements, specified in ARM 17.14.511 are run-on and run-off control systems requirements, requirements that facilities be fenced to prevent unauthorized access, and prohibitions of point source and nonpoint source discharges which would violate Clean Water Act requirements.

ARM 17.50.530 (**Applicable**) sets forth the closure requirements for landfills. Class II landfills must include a 24-inch final cover system that meets the following criteria:

1. minimize infiltration through the closed unit by the use of an infiltration layer that contains a minimum 18 inches of earthen material and has a permeability less than or equal to the permeability of any bottom liner, barrier layer, or natural subsoils or a permeability no greater than 1×10^{-5} cm/sec, whichever is less;
2. minimize erosion of the final cover by the use of a seed bed layer that contains a minimum of six inches of earthen material that is capable of sustaining native plant growth and protecting the infiltration layer from frost effects and rooting damage;
3. revegetate the final cover with native plant growth within one year of placement of the final cover. (ARM 17.50.530(1)(b) allows DEQ to approve an alternative final cover design if it achieves the reduction in infiltration and protection from erosion to a level at least as equivalent as the stated criteria.)

ARM 17.50.531 (**Applicable**) sets forth post closure care requirements for Class II landfills. Post closure care must be conducted for a period sufficient to protect human health and the

environment. Post closure care requires maintenance of the integrity and effectiveness of any final cover, including making repairs to the cover as necessary to correct the effects of settlement, subsidence, erosion, or other events, and preventing run-on and run-off from eroding or otherwise damaging the cover and comply with the groundwater monitoring requirements found at ARM Title 17, chapter 14, subchapter 7.

In addition, § 75-10-212, MCA, (**Applicable**) prohibits dumping or leaving any debris or refuse upon or within 200 yards of any highway, road, street or alley of the State or other public property, or on privately owned property where hunting, fishing, or other recreation is permitted. However, the restriction relating to privately owned property does not apply to the owner, his agents, or those disposing of debris or refuse with the owner's consent.

40 CFR Part 257 (**Applicable**) establishes standards with which solid waste disposal must comply to avoid possible adverse effects on health or the environment. These criteria apply to any remedial alternatives that require any type of onsite solid waste disposal. The criteria do not apply to hazardous waste disposal that is subject to regulation under subtitle C of the Resource Conservation and Recovery Act (RCRA). Part 257.3-2 provides for the protection of threatened or endangered species. Part 257.3-3 provides that a facility shall not cause the discharge of pollutants into waters of the United States. Part 257.3-4 states that a facility or practice shall not contaminate underground drinking water. Part 257.3- states that a facility or practice shall not engage in open burning of solid waste. Part 257.3-8 states the explosive limits or other specifics regarding safety.

ARM 17.36.901 set seq. (**Applicable**) governs onsite subsurface wastewater treatment system. If such a system is constructed, altered or extended, these regulations apply.

VCP Compliance: Non-hazardous waste from this facility will be transported and disposed of at [insert the name of the disposal facility], a licensed solid waste management facility, in accordance with these ERCLs. The impacted soil remaining onsite will not adversely affect human health or the environment as it will be located below the ground surface and as indicated in Section 3.8.3 it is not leaching contaminants to groundwater. Dumping is not part of the proposed action and the owner of the facility has consented to leaving impacted soil below five feet at the facility. An onsite subsurface wastewater treatment system is not proposed for the facility. Therefore, the proposed remedy meets the requirements of these ERCLs.

Hazardous Waste Management Requirements

RCRA, 42 U.S.C. §§ 6901 et seq., (**Applicable**) and the Montana Hazardous Waste Act, §§ 75-10-401 et seq., MCA, (**Applicable**) and regulations under these acts establish a regulatory structure for the generation, transportation, treatment, storage and disposal of hazardous wastes. These requirements are applicable to substances and actions at the facility which involve the active management of hazardous wastes.

Wastes may be designated as hazardous by either of two methods: listing or demonstration of a hazardous characteristic. Listed wastes are the specific types of wastes determined by EPA to be hazardous as identified in 40 CFR Part 261, Subpart D (40 CFR 261.30 - 261.33) (**Applicable**). Listed wastes are designated hazardous by virtue of their origin or source, and must be managed

as hazardous wastes regardless of the concentration of hazardous constituents. Characteristic wastes are those that by virtue of concentrations of hazardous constituents demonstrate the characteristic of ignitability, corrosivity, reactivity or toxicity, as described at 40 CFR Part 261, Subpart C (**Applicable**).

See 40 CFR 261.31 (Hazardous Waste Numbers F001 and F002) (**Applicable**) and ARM 17.54.501(**Applicable**). Certain of the wastes at the facility demonstrate the characteristic of toxicity, and are therefore characteristic hazardous wastes upon excavation. The facility also contains F001 and F002 listed hazardous wastes for chlorinated solvents. The various media and wastes at the facility contaminated by the F001 and F002 wastes are also hazardous wastes pursuant to 40 CFR Part 261 upon excavation. The RCRA requirements specified below are applicable requirements for the treatment, storage and disposal of these wastes. These ERCLs apply to remedial actions; on-going operations must comply with state and federal requirements and permits.

ARM 17.53.112 (**Applicable**) specifies that the presence of listed and characteristic hazardous waste require the permit requirements specified below that are applicable for the types of waste management units or the waste management practices anticipated in the remedial actions at the facility.

The RCRA regulations at 40 CFR Part 263 (**Applicable**) establish standards that apply to transporters of hazardous waste. These standards include requirements for immediate action for hazardous waste discharges. These standards are applicable for any onsite transportation. These standards are independently applicable for any offsite transportation.

The regulations at 40 CFR 264, Subpart B (**Applicable**) establish general facility requirements. These standards include requirements for general waste analysis, security and location standards.

The regulations at 40 CFR 264, Subpart F (**Applicable**) establish requirements for groundwater protection for RCRA-regulated solid waste management units (i.e., waste piles, surface impoundments, land treatment units, and landfills). The regulations at Subpart F establish monitoring requirements for RCRA-regulated solid waste management units (i.e., waste piles, surface impoundments, land treatment units, and landfills). Subpart F provides for three general types of groundwater monitoring: detection monitoring (40 CFR 264.98); compliance monitoring (40 CFR 264.99); and corrective action monitoring (40 CFR 264.100). Monitoring wells must be cased according to 264.97(c).

Monitoring is required during the active life of a hazardous waste management unit. If hazardous waste remains, monitoring is required for a period necessary to protect human health and the environment.

40 CFR Part 264, Subpart G (**Applicable**) establishes that hazardous waste management facilities must be closed in such a manner as to (a) minimize the need for further maintenance and (b) control, minimize or eliminate, to the extent necessary to protect public health and the environment, post-closure escape of hazardous wastes, hazardous constituents, leachate,

contaminated runoff or hazardous waste decomposition products to the ground or surface waters or to the atmosphere.

Requirements for facilities requiring post-closure care include the following: the facilities must undertake appropriate monitoring and maintenance actions, control public access, and control post-closure use of the property to ensure that the integrity of the final cover, liner, or containment system is not disturbed. In addition, all contaminated equipment, structures and soil must be properly disposed of or decontaminated unless exempt and free liquids are removed or solidified, the wastes stabilized, and the waste management unit covered.

40 CFR Part 264, Subparts I and J (**Applicable**) apply to owners and operators of facilities that store hazardous waste in containers, and store or treat hazardous waste in tanks, respectively. These regulations are applicable to any storage or treatment in these units at the facility. The related provisions of 40 CFR 261.7 regarding residues of hazardous waste in empty containers are also applicable.

Since the wastes to be treated are listed and characteristic wastes, the RCRA Land Disposal Restrictions (LDRs) treatment levels set forth in 40 CFR Part 268 are applicable requirements including the treatment levels for F001 and F002 listed wastes for the disposal of hazardous wastes generated at the facility. With the exception of treated soils, hazardous wastes are prohibited from disposal onsite.

The Hazardous Waste Identification Rule (HWIR) Media Rule promulgated at 63 Fed. Reg. 65874 (November 30, 1998) (**Applicable**) allows listed waste treated to levels protective of human health and the environment to be disposed onsite without triggering land ban or minimum technology requirements for these disposal requirements. Treated soils containing hazardous waste will need to meet cleanup levels to avoid triggering land ban or minimum technology requirements for these disposal requirements.

40 CFR Part 270 (**Applicable**) sets forth the hazardous waste permit program. The requirements set forth in 40 CFR Part 270, Subpart C (permit conditions), including the requirement to properly operate and maintain all facilities and systems of treatment and control are applicable requirements.

The Montana Hazardous Waste Act, §§ 75-10-401 et seq., MCA (**Applicable**) and regulations under this act establishes a regulatory structure for the generation, transportation, treatment, storage and disposal of hazardous wastes. These requirements are applicable to substances and actions at the facility which involve listed and characteristic hazardous wastes.

ARM 17.53.501-502 (**Applicable**) adopts the equivalent of RCRA regulations at 40 CFR Part 261, establishing standards for the identification and listing of hazardous wastes, including standards for recyclable materials and standards for empty containers, with certain State exceptions and additions.

ARM 17.53.601-604 (**Applicable**) adopts the equivalent to RCRA regulations at 40 CFR Part 262, establishing standards that apply to generators of hazardous waste, including standards pertaining to the accumulation of hazardous wastes, with certain State exceptions and additions.

ARM 17.53.701-708 (**Applicable**) adopts the equivalent to RCRA regulations at 40 CFR Part 263, establishing standards that apply to transporters of hazardous waste, with certain State exceptions and additions.

ARM 17.53.801-803 (**Applicable**) adopts the equivalent to RCRA regulations at 40 CFR Part 264, establishing standards that apply to hazardous waste treatment, storage and disposal facilities, with certain State exceptions and additions.

ARM 17.53.1101-1102 (**Applicable**) adopts the equivalent to RCRA regulations at 40 CFR Part 268, establishing land disposal restrictions, with certain State exceptions and additions.

Section 75-10-422 MCA (**Applicable**) prohibits the unlawful disposal of hazardous wastes.

ARM 17.53.1101-1102 (**Applicable**) adopts the equivalent to RCRA regulations at 40 CFR Part 270, which establish standards for permitted facilities, with certain State exceptions and additions.

ARM 17.53.1401 (**Applicable**) adopts the equivalent of RCRA regulations at 40 CFR Part 279 that set forth the standards for the management of used oil.

VCP Compliance: As described in Section 5.1, the proposed remedy involves properly treating, transporting, and disposing of all hazardous waste at [insert the name of the facility], a permitted facility, in accordance with the requirements of these ERCLs.

National Pollutant Discharge Elimination System (NPDES) and the Montana Pollutant Discharge Elimination System (MPDES)

40 CFR Part 122, Subpart C and ARM 17.30.1342-1344 (**Applicable**) set forth the substantive requirements applicable to all MPDES and NPDES permits. Permits must be obtained for all surface and groundwater systems that are part of remedial actions, including proper operation and maintenance of all facilities and systems of treatment and control.

VCP Compliance: A permit will be obtained prior to initiation of cleanup activities and the conditions of the permit will be met throughout the remediation. Therefore, the proposed remedy meets the requirements of this ERCL.

Technology-Based Treatment

40 CFR Part 125 and ARM 17.30.1344 (**Applicable**) set forth criteria and standards for dischargers. Based on the source, the technology-based treatment standards include the best practicable control technology (BPT), best conventional pollutant control technology (BCT), or best available technology economically achievable (BAT).

VCP Compliance: As shown in Section 5.1, the remedy employs the BAT for this type of remediation. Therefore, the proposed remedy meets the requirements of these ERCLs.

Underground Injection Control Program

The Underground Injection Control Program provided in 40 CFR 146 (**Applicable**) sets forth the standards and criteria for the injection of substances into aquifers. Wells are classified as Class I through V, depending on the location and the type of substance injected. For all classes, no owner may construct, operate or maintain an injection well in a manner that results in the contamination of an underground source of drinking water at levels that violate maximum contaminant levels (MCLs) or otherwise adversely affect the health of persons. Each classification may also contain further specific standards, depending on the classification.

VCP Compliance: No injection of substances will occur as part of the proposed remedy. Therefore, the proposed remedy meets the requirements of these ERCLs.

Underground Storage Tank Requirements

40 CFR Part 280, Subpart F (**Applicable**) sets forth requirements for Release Response and Corrective Action for underground storage tank (UST) Systems Containing Petroleum or Hazardous Substances. These include initial response, initial abatement measures, facility characterization, free product removal, and investigations for soil and groundwater cleanup.

40 CFR 280.64 (**Applicable**) provides that where investigations in connection with leaking underground storage tanks reveal the presence of free product, owners and operators must remove free product to the maximum extent practicable as determined by the implementing agency. This regulation also requires that the free product removal be conducted in a manner that minimizes the spread of contamination into previously uncontaminated zones by using recovery and disposal techniques appropriate to the hydrogeologic conditions at the facility, and that properly treats, discharges or disposes of recovery byproducts in compliance with applicable local, state and federal regulations.

40 CFR 280.64 (**Applicable**) provides that abatement of free product migration is a minimum objective for the design of the free product removal system provides that any flammable products must be handled in a safe and competent manner to prevent fires or explosions.

40 CFR Part 280, Subpart D (**Applicable**) sets forth requirements for release detection.

40 CFR 280.43 (**Relevant**) specifies groundwater monitoring requirements for underground storage tanks and requires continuous monitoring devices or manual methods used to detect the presence of at least 1/8 of an inch of free product on top of the groundwater in the monitoring wells.

The Montana regulations regarding underground storage tanks include similar requirements.

ARM Title 17, Chapter 56, Sub-Chapter 4 (**Applicable**) specifies release detection.

ARM 17.56.407 (**Applicable**) specifies groundwater monitoring requirements for underground storage tanks and requires continuous monitoring devices or manual methods used to detect the presence of at least 1/8 of an inch of free product on top of the groundwater in the monitoring wells.

ARM Title 17, Chapter 56, Sub-Chapter 6 (**Applicable**) specifies release response and corrective action for tanks containing petroleum or hazardous substances.

ARM 17.56.602 through 605 (**Applicable**) requires certain mitigation measures including removal of as much of the regulated substance from the system as is necessary to prevent further release into the environment and prevention of further migration of the released substance into surrounding soil and groundwater.

VCP Compliance: All underground storage tanks and associated contamination have been removed from the facility previously in compliance with these ERCLs. Therefore, the proposed remedy meets the requirements of these ERCLs.

Reclamation and Revegetation Requirements

The hydrology regulations promulgated under the Strip and Underground Mine Reclamation Act, §§ 82-4-201 *et seq.*, MCA (**Relevant**) provide detailed guidelines for addressing the hydrologic impacts of mine reclamation activities and earth moving projects and are relevant for addressing these impacts at the facility.

ARM 17.24.501 (**Relevant**) gives general backfilling and final grading requirements.

ARM 17.24.631 (**Relevant**) provides that long-term adverse changes in the hydrologic balance from mining and reclamation activities, such as changes in water quality and quantity, and location of surface water drainage channels shall be minimized. Water pollution must be minimized and, where necessary, treatment methods utilized. Diversions of drainages to avoid contamination must be used in preference to the use of water treatment facilities. Other pollution minimization devices must be used if appropriate, including stabilizing disturbed areas through land shaping, diverting runoff, planting quickly germinating and growing stands of temporary vegetation, regulating channel velocity of water, lining drainage channels with rock or vegetation, mulching, and control of acid-forming, and toxic-forming waste materials.

ARM 17.24.633 (**Relevant**) states that all surface drainage from a disturbed area must be treated by the best technology currently available (BTCA). Treatment must continue until the area is stabilized.

ARM 17.24.635 through 17.24.637 (**Relevant**) set forth requirements for temporary and permanent diversions.

ARM 17.24.638 (**Relevant**) specifies sediment control measures to be implemented during operations.

ARM 17.24.640 (**Relevant**) provides that discharge from sedimentation ponds, permanent and temporary impoundments, and diversions shall be controlled by energy dissipaters, riprap channels, and other devices, where necessary, to reduce erosion, prevent deepening or enlargement of stream channels, and to minimize disturbance of the hydrologic balance.

ARM 17.24.641 (**Relevant**) indicates that practices to prevent drainage from acid or toxic forming spoil material into groundwater and surface water will be employed.

ARM 17.24.703 (**Relevant**) require that when using materials other than, or along with, soil for final surfacing in reclamation, the operator must demonstrate that the material (1) is at least as capable as the soil of supporting the approved vegetation and subsequent land use, and (2) the medium must be the best available in the area to support vegetation. Such substitutes must be used in a manner consistent with the requirements for redistribution of soil in ARM 17.24.701 and 702.

ARM 17.24.713 (**Relevant**) provides that seeding and planting of disturbed areas must be conducted during the first appropriate period for favorable planting after final seedbed preparation, but may not be more than ninety days after soil has been replaced.

ARM 17.24.714 (**Relevant**) requires use of a mulch or cover crop or both until an adequate permanent cover can be established. Use of mulching and temporary cover may be suspended under certain conditions.

ARM 17.24.716 (**Relevant**) establishes the required method of revegetation, and provides that introduced species may be substituted for native species as part of an approved plan for alternate vegetation.

ARM 17.24.721 (**Relevant**) specifies that rills and gullies must be stabilized and the area reseeded and replanted if the rills and gullies are disrupting the reestablishment of the vegetative cover.

ARM 17.24.751 (**Relevant**) measures to prevent degradation of fish and wildlife habitat will be employed.

ARM 17.24.761 (**Relevant**) requires that fugitive dust control measures will be employed during excavation and construction activities to minimize the emission of fugitive dust.

VCP Compliance: The excavation will be backfilled with clean fill and regraded to slopes appropriate for its usage. Surface water controls will be implemented during construction to prevent runoff from contaminated soil. Final surfacing will use appropriate soil material. Seeding and planting of disturbed areas will be conducted within ninety days after the soil has been replaced. A mulch cover will be used until an adequate cover is established. The disturbed areas will be revegetated consistent with these requirements. Surface water run-on and runoff measures will be implemented to prevent the spread of contamination into areas where it could degrade fish and wildlife habitat. Dust control measures will be used during excavation and backfilling areas. Thus the proposed remedy meets the requirements of these ERCLs.

Noxious Weed Requirements

Section 7-22-2101(7)(a), MCA (**Applicable**) defines "noxious weeds" as any exotic plant species established or that may be introduced in the state which may render land unfit for agriculture, forestry, livestock, wildlife, or other beneficial uses or that may harm native plant communities and that is designated: (i) as a statewide noxious weed by rule of the department; or (ii) as a district noxious weed by a board, following public notice of intent and a public hearing.

Designated noxious weeds are listed in ARM 4.5.201 through 4.5.204 (**Applicable**) and must be managed consistent with weed management criteria developed under § 7-22-2109(2)(b), MCA (**Applicable**).

Section 7-22-2152, MCA (**Applicable**) requires that any person proposing certain actions including but not limited to a solid waste facility, a highway or road, a commercial, industrial, or government development, or any other development that needs state or local approval and that results in the potential for noxious weed infestation within a district shall notify the district weed board at least 15 days prior to the activity. The board will require that the areas be seeded, planted, or otherwise managed to reestablish a cover of beneficial plants. The person committing the action shall submit to the board a written plan specifying the methods to be used to accomplish revegetation at least 15 days prior to the activity. The plan must describe the time and method of seeding, fertilization practices, recommended plant species, use of weed-free seed, and the weed management procedures to be used. The plan is subject to approval by the board, which may require revisions to bring the revegetation plan into compliance with the district weed management plan. The activity for which notice is given may not occur until the plan is approved by the board and signed by the presiding officer of the board and by the person or a representative of the agency responsible for the action. The signed plan constitutes a binding agreement between the board and the person or agency. The plan must be approved, with revisions if necessary, within 10 days of receipt by the board.

VCP Compliance: As specified in Section 5.1, the county weed board will be notified of the impending cleanup activity and provided with a copy of the VCP if requested. A revegetation plan meeting the requirements specified in Section 5.1 and any other specific requirements of the board will be submitted to the board at least 15 days prior to initiation of the cleanup. A copy of the revegetation and approval letter will be provided to DEQ when available. Therefore, the proposed remedy meets the requirements of these ERCLs.

2.0 CONTAMINANT-SPECIFIC ERCLs

Groundwater Standards

Safe Drinking Water Act – 42 U.S.C. § 300f *et seq.* and the National Primary Drinking Water Regulations (40 CFR Part 141) (**Relevant – this ERCL may be applicable if a public drinking water supply is involved at the facility**) establish MCLs for contaminants in drinking water distributed in public water systems. The requirements were evaluated in this ERCLs analysis in conjunction with the ground water classification standards promulgated by the State of Montana. Because the aquifer affected by the facility is currently and has been used as a drinking water source, the Secondary Maximum Contaminant Levels (SMCLs) specified in 40 CFR Part 143.3

are relevant requirements which are ultimately to be attained by the remedy for the facility. 40 CFR 143.3 contains standards for color, odor (3 threshold odor number) and corrosivity which are relevant to the remedial action.

The Montana Water Quality Act, § 75-5-605, MCA (**Applicable**) provides that it is unlawful to cause pollution of any state waters and § 75-6-112, MCA (**Applicable**) provides that it is unlawful to discharge drainage or other waste that will cause pollution of state waters used as a source for a public water supply or for domestic use as well as provides other unlawful acts. Section 75-5-605, MCA (**Applicable**) also states that it is unlawful to place or cause to be placed any wastes where they will cause pollution of any state waters. Section 75-5-303, MCA (**Applicable**) states that existing uses of state waters and the level of water quality necessary to protect the uses must be maintained and protected.

ARM 17.30.1005 and –1006 (**Applicable**) provides that groundwater is classified I through IV based on its beneficial uses, and states that groundwater is to be classified according to actual quality or use, whichever places the groundwater in a higher class. Class I is the highest quality class; class IV the lowest.

ARM 17.30.1006 (**Applicable**) sets the standards for the different classes of groundwater. Concentrations of dissolved substances in groundwater may not exceed the human health standards listed in Department Circular WQB-7, (**Applicable**) including narrative standards, which are promulgated pursuant to the state Water Quality Act, §§ 75-5-101, et seq., MCA. Concentrations of other dissolved or suspended substances must not exceed levels that render the waters harmful, detrimental or injurious to beneficial uses. For the primary contaminants of concern, the WQB-7 levels are listed below.

[list contaminants of potential concern (COPCs) and their standards]

ARM 17.30.1011 (**Applicable**) provides that any ground water whose existing quality is higher than the standard for its classification must be maintained at that high quality unless degradation may be allowed under the principles established in § 75-5-303, MCA, and the nondegradation rules at ARM 17.30.701 et seq.

VCP Compliance: No public drinking water supply sources are located near the facility. As described in Section 3.8.3 of this VCP, the impacted soil is not leaching COPCs to the groundwater at concentrations above human health standards or risk based screening levels. Groundwater at the facility would be classified as Class II based on specific conductivity greater than 1,000 microSiemens/cm but less than 2,500 microSiemens/cm. Groundwater at the facility does not exceed the standards listed in WQB-7 or the MCLs. The proposed remedy will not create additional groundwater degradation, which will be verified through groundwater monitoring. Therefore, the proposed remedy meets the requirements of these ERCLs.

Surface Water Quality Standards

The Montana Water Quality Act, §§ 75-5-101 et seq., MCA, (**Applicable**) establishes requirements for restoring and maintaining the quality of surface and ground waters and the federal Clean Water Act, 33 U.S.C. §§ 1251 et seq., establishes requirements for restoring and

maintaining the quality of surface waters. Under these Acts the state has authority to adopt water quality standards designed to protect beneficial uses of each water body and to designate uses for each water body. Montana's regulations classify state waters according to quality, place restrictions on the discharge of pollutants to state waters and prohibit the degradation of state waters.

ARM 17.30.611(1) (**Applicable**) provides that the waters of the [insert river name] River drainage from [insert stretch description] are classified "B-3" for water use.

The "B-3" classification standards are contained in ARM 17.30.625 (**Applicable**) of the Montana water quality regulations. This section provides the beneficial uses for the B-3 classification, and provides that concentrations of toxic, carcinogenic, or harmful parameters in the waters may not exceed WQB-7 standards. The section also provides the specific water quality standards for water classified as B-3.

For the primary contaminants of concern, the WQB-7 levels are listed below. WQB-7 provides that "whenever both Aquatic Life Standards and Human Health Standards exist for the same analyte, the more restrictive of these values will be used as the numeric Surface Water Quality Standard."

[list COPCs and their standards]

ARM 17.30.625 provides that concentrations of carcinogenic, bioconcentrating, toxic or harmful parameters which would remain in the water after conventional water treatment may not exceed the applicable standards set forth in department circular WQB-7.

The B-3 classification standards at ARM 17.30.625 also include the following criteria: 1) dissolved oxygen concentration must not be reduced below the levels given in department circular WQB-7; 2) hydrogen ion concentration (pH) must be maintained within the range of 6.5 to 9.0; 3) the maximum allowable increase above naturally occurring turbidity is 5 nephelometric turbidity units; 4) temperature increases must be kept within prescribed limits; 5) no increase are allowed above naturally occurring concentrations of sediment, settleable solids, oils, floating solids, which will or is likely to create a nuisance or render the waters harmful, detrimental, or injurious to public health, recreation, safety, welfare, livestock, wild animals, birds, fish or other wildlife; and 6) true color must be kept within specified limits.

ARM 17.30.637 (**Applicable**) prohibits discharges containing substances that will: (a) settle to form objectionable sludge deposits or emulsions beneath the surface of the water or upon adjoining shorelines; (b) create floating debris, scum, a visible oil film (or be present in concentrations at or in excess of 10 milligrams per liter) or globules of grease or other floating materials; (c) produce odors, colors or other conditions which create a nuisance or render undesirable tastes to fish flesh or make fish inedible; (d) create concentrations or combinations of materials which are toxic or harmful to human, animal, plant or aquatic life; (e) create conditions which produce undesirable aquatic life.

ARM 17.30.637 (**Applicable**) also provides that leaching pads, tailing ponds, or water, waste or product holding facilities must be located, constructed, operated and maintained to prevent any discharge, seepage, drainage, infiltration, or flow which may result in pollution of state waters, and a monitoring system may be required to ensure such compliance. No pollutants may be discharged and no activities may be conducted which, either alone or in combination with other wastes or activities, result in the total dissolved gas pressure relative to the water surface exceeding 110 percent of saturation.

ARM 17.30.705 (**Applicable**) provides that for any surface water, existing and anticipated uses and the water quality necessary to protect these uses must be maintained and protected unless degradation is allowed under the nondegradation rules at ARM 17.30.708.

VCP Compliance: As described in Section 5.1 of this VCP, remedial actions at the facility include relocation of the stream and will result in remediation of the surface water and sediment in the stream. The remedial actions will be conducted in accordance with applicable permits to minimize the discharge of any material to surface water at the facility. Following the remediation, surface water at the facility will not exceed the standards listed in WQB-7. Therefore, the VCP meets the requirements of these ERCLs.

Stormwater Runoff

Pursuant to ARM Title 17, Chapter 30, Sub-Chapter 6, and Title 17, Chapter 30, Sub-Chapter 13, including ARM 17.30.1332 (**Applicable**), DEQ issues general stormwater permits for certain activities. Generally, the permits require the permittee to implement best management practices (BMP) and to take all reasonable steps to minimize or prevent any discharge which has a reasonable likelihood of adversely affecting human health or the environment. However, if there is evidence indicating potential or realized impacts on water quality due to any storm water discharge associated with the activity, an individual MPDES permit or alternative general permit may be required.

VCP Compliance: As described in Section 5.1 of this VCP, remedial actions at the facility are not expected to result in runoff to surface water at the facility. Remedial actions will be halted if significant runoff is generated and will not resume until adequate runoff control measures are in place. Therefore, the VCP meets the requirements of this ERCL.

Air Standards

The Clean Air Act (42 U.S.C. §§ 7401 et seq.) (**Applicable**) provides limitations on air emissions resulting from cleanup activities or emissions resulting from wind erosion of exposed hazardous substances. Some of these ERCLs, identified as action-specific requirements could also be identified here as contaminant specific requirements but will not be repeated.

Sections 75-2-101, et seq., MCA, (**Applicable**) provides that state emission standards are enforceable under the Montana Clean Air Act.

VCP Compliance: As described in Section 5.1 of this VCP, remedial actions at the facility will include wetting and other dust control measures. Remedial actions will be halted if significant

dust is generated and will not resume until adequate dust control measures are in place. Therefore, the VCP meets the requirements of these ERCLs.

Natural Streambed and Land Preservation Act

Section 75-7-111, MCA, (**Applicable**) provides that a person planning to engage in any activity that will physically alter or modify the bed or banks of a stream must give written notice to the Board of Supervisors of a Conservation District, the Directors of a Grass Conservation District, or the Board of County Commissioners if the proposed project is not within a district, and must submit a "310 Permit" application to one of those entities.

ARM 36.2.404 (**Applicable**) establishes minimum standards which would be applicable if a remedial action alters or affects a streambed, including any channel change, new diversion, riprap or other streambank protection project, jetty, new dam or reservoir or other commercial, industrial or residential development. No such project may be approved unless reasonable efforts will be made consistent with the purpose of the project to minimize the amount of stream channel alteration, insure that the project will be as permanent a solution as possible and will create a reasonably permanent and stable situation, insure that the project will pass anticipated water flows without creating harmful erosion upstream or downstream, minimize turbidity, effects on fish and aquatic habitat, and adverse effects on the natural beauty of the area and insure that streambed gravels will not be used in the project unless there is no reasonable alternative. Soils erosion and sedimentation must be kept to a minimum. Such projects must also protect the use of water for any useful or beneficial purpose. See § 75-7-102, MCA.

VCP Compliance: As described in Section 5.1 of this VCP, these permits will be obtained before streambank relocation is conducted at the facility. All conditions of the permits will be met during the remedial activity. Therefore, the VCP meets the requirements of these ERCLs.

3.0 LOCATION-SPECIFIC ERCLS

The Endangered Species Act

This statute and implementing regulations (16 U.S.C. §§ 1531 – 1543, 50 CFR Part 402, 40 CFR § 6.302(h), 40 CFR § 257.3-2) (**Relevant**) require that any federal activity or federally authorized activity may not jeopardize the continued existence of any threatened or endangered species or destroy or adversely modify a critical habitat.

Sections 87-5-106, 107, and 111, MCA (**Applicable**) state that endangered species should be protected in order to maintain and to the extent possible enhance their numbers. These sections list endangered species, prohibited acts and penalties. See also, §§ 87-5-106 and 87-5-201, MCA, (**Applicable**) concerning protection of wild birds, nests and eggs.

ARM 12.5.201 (**Applicable**) states that certain activities are prohibited with respect to specified endangered species including American peregrine falcon.

VCP Compliance: Based on information obtained from the Montana Natural Heritage Program (Appendix G of the VCP), endangered species have not been identified at the facility. Thus, the proposed remedy meets the requirements of this ERCL.

Migratory Bird Treaty Act

This requirement (16 U.S.C. §§ 703 et seq.) (**Relevant**) establishes a federal responsibility for the protection of the international migratory bird resource and requires continued consultation with the appropriate program within the USFWS during remedial design and remedial construction to ensure that the cleanup of the facility does not unnecessarily impact migratory birds.

VCP Compliance: Migratory birds are present near the facility. However, the facility does not provide the majority of habitat for these species relative to the surrounding area. There are no features of the facility that are particularly attractive to these species. Therefore, remedial actions at the facility are not expected to impact migratory birds. Thus, the proposed remedy meets the requirements of this ERCL.

Bald Eagle Protection Act

This requirement (16 U.S.C. §§ 668 et seq.) (**Relevant**) establishes a federal responsibility for protection of bald and golden eagles, and requires continued consultation with the appropriate program within the USFWS during remedial design and remedial construction to ensure that any cleanup of the facility does not unnecessarily adversely affect the bald and golden eagle.

VCP Compliance: Bald and golden eagles have not been observed at the facility. In addition, the facility does not provide the majority of habitat for these species relative to the surrounding area. There are no features of the facility that are particularly attractive to these species. Therefore, remedial actions at the facility are not expected to impact these species. Thus, the proposed remedy meets the requirements of this ERCL.

Historic Sites, Buildings, Objects and Antiquities Act

These requirements, found at 16 U.S.C. 461 et seq., (**Relevant**) provide that, in conducting an environmental review of a proposed action, the responsible official shall consider the existence and location of natural landmarks using information provided by the National Park Service pursuant to 36 CFR § 62.6(d) to avoid undesirable impacts upon such landmarks.

VCP Compliance: Current data indicate that no landmarks are present on the facility. Thus, the proposed remedy meets the requirements of this ERCL.

Fish and Wildlife Coordination Act

These standards are found at 16 U.S.C. § 661 et seq. and 40 CFR 6.302(g) (**Relevant**) and require that federally funded or authorized projects ensure that any modification of any stream or other water body affected by a funded or authorized action provide for adequate protection of fish and wildlife resources.

VCP Compliance: As stated in section 5.1 of the VCP, the proposed remedy includes rerouting of the stream channel. Any fish caught in pools after the stream diversion will be collected and relocated into the active stream channel. No other wildlife species reside primarily at the facility and the proposed remedy is not expected to impact any other species. Therefore, the proposed remedy meets the requirements of these ERCLs.

Floodplain Management Order

This requirement (40 CFR Part 6, Appendix A, Executive Order No. 11,988) (**Relevant**) mandates that federally funded or authorized actions within the 100 year flood plain avoid, to the maximum extent possible, adverse impacts associated with development of a floodplain.

VCP Compliance: As stated in section 5.1 of the VCP, the proposed remedy includes reconstruction of a 100-year floodplain along the new stream channel. Therefore, the proposed remedy will not result in adverse impacts to the floodplain and will meet the requirements of this ERCL.

Protection of Wetlands Order

This requirement (40 CFR Part 6, Appendix A, Executive Order No. 11,990) (**Relevant**) mandates that federal agencies and potentially responsible parties avoid, to the extent possible, the adverse impacts associated with the destruction or loss of wetlands and to avoid support of new construction in wetlands if a practicable alternative exists.

Section 404(b)(1), 33 U.S.C. § 1344(b)(1) (**Relevant**) also prohibits the discharge of dredged or fill material into waters of the United States. Together, these requirements create a "no net loss" of wetlands standard.

VCP Compliance: No designated wetlands are present at the facility. However, if any undesignated wetlands habitat is disturbed by the proposed remedy, this habitat will be re-established by reseeding with appropriate vegetation and constructing the stream channel in a manner that supports this type of habitat. Therefore, the proposed remedy meets the requirements of these ERCLs.

Solid Waste Management Requirements

Regulations promulgated under the Solid Waste Management Act, §§ 75-10-201 et seq., MCA, (**Applicable**) specify requirements that apply to the location of any solid waste management facility.

Under ARM 17.50.505(1) (**Applicable**), a facility for the treatment, storage or disposal of solid wastes:

- (a) must be located where a sufficient acreage of suitable land is available for solid waste management;
- (b) may not be located in a 100-year floodplain;
- (c) may be located only in areas which will prevent the pollution of ground and surface waters and public and private water supply systems;
- (d) must be located to allow for reclamation and reuse of the land;

(e) drainage structures must be installed where necessary to prevent surface runoff from entering waste management areas; and

(f) where underlying geological formations contain rock fractures or fissures which may lead to pollution of the ground water or areas in which springs exist that are hydraulically connected to a proposed disposal facility, only Class III disposal facilities may be approved.

VCP Compliance: All solid waste at the facility will be removed, transported, and properly disposed of at [insert the name of the facility], an appropriate permitted disposal facility. Therefore, the proposed remedy meets the requirements of these ERCLs.

Floodplain and Floodway Management Act and Requirements

The following standards are included here to indicate the restrictions on any related activities that might occur in or affect the floodway or floodplain.

Section 76-5-401, MCA and ARM 36.15.601 (**Applicable**) provide that residential, certain agricultural, industrial-commercial, recreational and other uses are permissible within the designated floodway, provided they do not require structures other than portable structures, fill or permanent storage of materials or equipment.

Section 76-5-402, MCA and ARM 36.15.701 (**Applicable**) provide that in the flood fringe (i.e., within the floodplain but outside the floodway), residential, commercial, industrial, and other structures may be permitted subject to certain conditions relating to placement of fill, roads, and floodproofing.

ARM 36.15.602(6) (**Applicable**) provides that domestic water supply wells may be permitted, even within the floodway, provided the well casing and well meets certain conditions.

ARM 36.15.602(5), 36.15.605, and 36.15.703 (**Applicable**) provide that solid and hazardous waste disposal and storage of toxic, flammable, hazardous, or explosive materials are prohibited anywhere in floodways or floodplains.

Section 76-5-402, MCA (**Applicable**) states that the following are prohibited in a floodway: buildings for living purposes or place of assembly or permanent use by human beings; any structure or excavation that will cause water to be diverted from the established floodway, cause erosion, obstruct the natural flow of water, or reduce the carrying capacity of the floodway; and the construction or permanent storage of an object subject to flotation or movement during flood level periods.

Section 76-5-406, MCA and ARM 36.15.216 (**Applicable**) contain substantive factors that address obstruction or use within the floodway or floodplain.

ARM 36.15.604 (increase in upstream elevation or significantly increase flood velocities), ARM 36.15.602(1) (excavation of material from pits or pools), and ARM 36.15.603 (water diversions

or changes in place of diversion) (**Applicable**) provide further conditions or restrictions that generally apply to specific activities within the floodway or floodplain.

ARM 36.15.701(3)(c) (**Applicable**) requires that roads, streets, highways and rail lines must be designed to minimize increases in flood heights.

ARM 36.15.701(3)(d) (**Applicable**) provides that structures and facilities for liquid or solid waste treatment and disposal must be floodproofed to ensure that no pollutants enter flood waters and may be allowed and approved only in accordance with DEQ regulations, which include certain additional prohibitions on such disposal.

ARM 36.15.702(2) (**Applicable**) provides the standards applied to residential, commercial or industrial structures.

ARM 36.15.606 (**Applicable**) provides that flood control works comply with safety standards for levees, floodwalls, and riprap.

ARM 36.15.901 (**Applicable**) requires electrical systems to be flood-proofed.

VCP Compliance: As stated in section 5.1 of the VCP, the proposed remedy includes reconstruction of a 100-year floodplain along the new stream channel. No development, structures or other features will be constructed in the floodplain. Therefore, the proposed remedy meets the requirements of these ERCLs.